

Research Article**The Prevalence of Dysphagia among Patients in Educational Hospitals of Zahedan in the second Half of 2012.****Ehsan Naderifar^{*1}, Rooholla Roohande², Sakine Moqanizade Arani³, Fahime Ashtab⁴, Faezeh Asadollahpour⁵**^{1,5}Lecturer in Speech Therapy, Health promotion research center, Zahedan university of medical sciences, Zahedan, Iran.²Faculty Member of Epidemiology and Bio-statistics Department, Zahedan university of medical sciences, Zahedan, Iran.³BS in Speech therapy. Zahedan university of medical sciences, Zahedan, Iran.⁴MSc Student in speech therapy, Varastegan Institute of Medical Sciences.***Corresponding author**

Ehsan Naderifar

Email: e.naderi.slp@gmail.com

Abstract: Dysphagia refers to any disturbance in movement of food bolus from mouth to stomach. Dysphagia may have many implications for social and physical health; dysphagic persons often have malnutrition and airway infections due to aspiration, and their reluctance to eat meals with others may lead to social isolation. Base on this fact that dysphagia can affect all health dimensions, knowledge of basic information about prevalence and etiology of dysphagia seems necessary. The purpose of this study was estimate the prevalence of dysphagia among patients, who were in Zahedan hospital wards. In this retrospective descriptive study, all of medical profiles of hospitalized patients of educational hospitals in the Zahedan city in the second Half of 2012 were selected. Data regarding existence or nonexistence of dysphagia, etiology of dysphagia, prevalence of dysphagia in different age and sex, and prevalence of dysphagia in different wards of the studied hospitals were recorded and for analysis SPSS 16 software was used. Among 7298 medical profiles of hospitalized patients, 2.1% of total patients had dysphagia and there wasn't significant difference between sexes regarding prevalence of dysphagia ($P>0.05$). The highest and lowest rates of dysphagia were observed for above 65 years old and between 0-19 years old, respectively. Also, the highest rates of dysphagia were in internal medicine ward. The results of present study suggest that speech therapist should be more aware to age and hospitals ward. With regard to higher prevalence of dysphagia in aging, and subsequent high risk of malnutrition and pneumonia, the more attention should be paid.**Keywords:** swallowing, Prevalence, Hospitals Wards, Swallowing disorder, Dysphagia.

INTRODUCTION

Dysphagia (difficulty to eat) or swallowing disorder is defined as disordered movement of the food from mouth to stomach due to variety of congenital abnormalities, structural damage and medical conditions [1-2]. Dysphagia can occur in all age groups [2] and make swallowing unsafe and increase the risk for malnutrition, dehydration, fetal choking episodes, pulmonary consequences of *aspiration*, long-term hospitalization, airway obstruction and ultimately death [1,3].

According to the different reports, the prevalence of dysphagia, depending on medical conditions, diagnostic instruments, studied population features and how sensitivity dysphagia is measured, was different. For example swallowing abnormalities occur in nearly 29-69% of stroke patients, 33-43% in Multiple Sclerosis Patients and in nearly 81% of Parkinson persons [4,5,6]. And also dysphagia is common in infants and young children; so that about 25% of

children are reported have some form of feeding disorder. This number estimated as high as 80% for developmentally delayed children [7].

Since dysphagia can have serious consequences such as malnutrition, pneumonia and aspiration, identification the more susceptible group of patients are very important. Early attempt to identification these patients, results in appropriate medical and rehabilitation interventions and prevent subsequent disability [8].

According to this fact that basic information about prevalence of dysphagia is important for intervention programming and also the prevalence of dysphagia is different in different hospital wards, but there have been no studies of dysphagia in different hospital wards. We therefore studied the prevalence of dysphagia in Zahedan hospital wards.

MATERIALS AND METHOD

In this retrospective descriptive study, 7298 medical profiles of hospitalized patients of educational hospitals (Imam Ali Hospital, Boo-Ali Hospital and Khatam Hospital) in the Zahedan city in the second Half of 2012 were selected. These profiles were related to different wards of hospitals (ENT, Pediatrics, NICU, ICU, Neurology, Surgery, Internal Medicine and Infection Wards).

The inclusion criterion was that the patients needed to have been hospitalized with a diagnosis of dysphagia or swallowing disorder.

This research consisted of collecting clinical and demographic data (such as gender, age and hospital ward) and swallowing disorders in medical profiles of patient and then based on information contained in medical profiles of patients, demographic and clinical data were adjusted with the questionnaire information.

To determine the presence or absence of dysphagia, physician report related to dysphagia and its symptoms in medical Profiles (including aspiration, pharyngeal stage disorder, aspiration, oral stage disorders and pharyngeal delay and...) was noted and necessary information was extracted. If the swallowing disorder or its symptoms were observed in the patient's profile, patient was considered as a person with dysphagia.

Finally data analysis for Descriptive statistical analysis and independent T-test was performed using Statistical Package for Social Sciences (SPSS), version 16.0.

RESULTS

The sample study comprised 7298 medical profiles, 4213 male (57%) and 3085 female (43%), in different ages was examined. The results of this study show that an average of 2.1% of hospitalized patients have dysphagia. The frequency of dysphagia in men and women were 78 (53.07 %) and 69(46.93%), respectively, and there was not significantly different between male and female ($P>0.05$) (see table1).

Swallowing disorder was most prevalent among the patients aged 65 years and over (59.87%).According to this study the lowest prevalence of dysphagia was related to patients aged 0-19 years old (see table 2).

Regarding the hospital wards, as we can see in table 3, frequencies of dysphagia in different hospital wards were different. The most prevalent of dysphagia in all of medicine profiles, was related to Internal Medicine ward(72.8%) and the lowest prevalence of dysphagia was related to Pediatrics, surgery, infection and NICU wards.

Table-1: Socio-demographic data

	Without swallowing disorders	With swallowing disorders	P
n (%)	7151(97.9)	147 (2.1)	
Gender n (%)			
Male	4135(57.82)	78 (53.07)	>0.05
Female	3016(42.18)	69 (46.93)	

Table-2: Prevalence of dysphagia in different age groups

Age (%)	Without swallowing disorders	With swallowing disorders	Total
Newborn (0-3)	1905 (26.63)	0 (0)	1905
Child (4-12)	1092 (15.29)	0 (0)	1092
Adolescent (13-19)	600 (8.4)	0 (0)	600
Young (20-40)	1814 (25.36)	20 (13.60)	1834
Adult (41-64)	1192 (16.66)	39 (26.53)	1231
Aging(65)	548 (7.66)	88 (59.87)	636

Table-3: Prevalence of dysphagia in different hospital wards

Hospital Wards	Without swallowing disorders (%)	With swallowing disorders (%)	Total
ENT Wards	607 (8.5)	20 (13.60)	627
Pediatrics Wards	1318 (18.43)	0 (0)	1318
NICU Wards	904 (12.64)	0 (0)	904
ICU Wards	165 (2.3)	10 (6.8)	175
Neurology Wards	275 (3.5)	10 (6.8)	285
Surgery Wards	2610 (36.5)	0 (0)	2610
Internal Medicine ward	416 (5.81)	107 (72.8)	523
Infection Ward	856 (11.97)	0 (0)	856

DISCUSSION

The aim of the present study was, to investigate occurrences of swallowing disorders in different hospital wards. In relation to gender, the sample was homogeneous and did not show any significant differences. This finding was in agreement with other studies: in the one study 1,581 patients, 51.1% were men and 48.9% were women; while in another study with 400 patients, 52.2% were men and 47.8% were women and in a study with a smaller number of patient (128 patients), 64% were male and 36% were women [9,10,11]. And also the Newmanet al's study (2007) reported that, the prevalence of dysphagia is not significant differences between male and female infants [12].

The results of this study showed that the highest frequency of swallowing disorder occurred in aging (above 65 years) and the lowest frequency was between 0-19 years. These findings were in agreement with other studies, in which the greater number swallowing disorders was found at the ages of 65 to 74 years [13,14,15]. Another study was concluded that greater age (≥ 70 years) was a predictive factor for swallowing disorders [9]. These results can be explained in this way that the greater the age is; the greater the chances are that the aging body becomes phono-articulatory (cheeks, lips, tongue), which would undermine the functions of the stomatognathic system (chewing, swallowing, respiration, voice and speech) and subsequently cause swallowing disorders, especially after stroke [13,9,15]. And according to Daggett et al (2006) and Barikroo (2010), these results may be due to this fact that with increasing the age, occurrence of different diseases and oro-pharyngeal insufficiency boost. These matters result in the increase in the rate of the swallowing disorder in this group [16,17]. Based on the results of the present study, the most prevalence of dysphagia was related to internal medicine ward. This finding is not in agreement with Zamani's Study, who found that most prevalence of swallowing disorder were in neurologic ward. However, this may be due to differences in medical profiles of hospitalized patient samples [18].

Recognizing swallowing disorder is extremely important and necessary for the performance of the speech therapy team in relation to their patients, in order to prevent and reduce hospital admissions and readmissions due to aspiration pneumonia, thereby aiming to stabilize the nutritional characteristics and improve the patients' quality of life.

CONCLUSION

In the present study, the most prevalent of dysphagia was found for aging and internal medicine ward. Therefore, speech therapists should be paying more attention to aging, because they are at risk of malnutrition and pneumonia, and hospital wards, especially internal medicine ward.

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